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THE STANDARD OF LIVING—UP OR DOWN?

In a democracy scarcely any public question is of greater importance than the standard of living of the common people. It is essential to know what is the actual level of this standard of living, and whether it is improving or deteriorating, not only because these facts are significant in themselves, but because they furnish the key to the solution of a number of other great problems. In the United States, diametrically opposite views are repeatedly expressed, with great conviction, as to the course of the standard of living, and each of these views finds ready acceptance with various audiences, according to their prejudices or preconceived notions.

It is probable that a much wider adherence is given to the opinion that the standard is improving than to the opposite view, partly because this is the comfortable and optimistic view, partly because the teaching of orthodox economics supports it, and most of all, perhaps, because of the failure to distinguish between two sorts of standards of living which exist in societies. These types of standards are the standard of a society as a whole, and the standard of a group within a society. It is perfectly possible, as history has repeatedly demonstrated, for the standard of a society as a whole to be improving, while that of one or more groups within the society is declining. Moreover, if the distribution of economic power within a society is very unequal, it may happen that the group, the standard of which is declining, may constitute a very large proportion, even a majority, of the total population. Here in the United States we are so familiar with the facts and figures depicting the enormous increase in prosperity of the nation and the rapid augmentation of wealth and income, that it is hard to realize that any considerable group of our people fails to share at all in this good fortune, and we easily jump to the conclusion that while the rate of gain of the poorer classes may not be so rapid as that of the wealthier classes, yet it is positive, so that every one has grounds for complacency, and none grounds for complaint.

It is significant that no reliable proofs have been presented in support of either view. Occasionally the orthodox view is bolstered up by statistical comparisons of the course of the price level of commodities in general with the index of general wages, but these figures are inadequate and inconclusive.

For some time the writer has experienced a growing conviction that this question of the course of the wage-earner's standard of living is altogether too vital to be left to random guesses and rash assumptions. Particularly has he felt that the statistical supports

of the orthodox view are wholly fallacious, for three principal reasons. First, indexes of price levels are usually based on wholesale prices, instead of the retail prices that the wage-earner pays. Second, indexes of price levels are almost always based on the prices of articles most of which do not enter directly into the budget of the wage-earner's family. Third, an index of wage levels is likely to be almost meaningless, because of the extreme difficulty in arriving at anything like an average of wages.

Furthermore, the writer has felt convinced that, in point of fact, the increase in prices in recent years has affected different classes of commodities very differently, and that those commodities, the prices of which have risen least rapidly, or have fallen, are those which belong in the general category of luxuries, while those articles, the prices of which have risen at a rate greater than the average, are the common everyday necessities of life, which constitute the major part of the workingman's expenditures.¹

Uncertainty as to the course of the standard of living of the wage-earner's family has been due to the lack of a basis of measurement, of a "yardstick," which would represent, in actual commodities, the elements in the workingman's standard, and which could be applied, in connection with the prices of those commodities at different times and places, to test the relative height of the standard of living of different groups. The following pages represent an effort to work out such a yardstick—a *standard* standard of living—and to apply it with reference to the longest period of time in the United States for which accurate data are available.

There are two elements in every standard of living—*income and outgo*. As for income, in the case of the wage-earner's family it consists primarily in wages. There are some other subsidiary sources of income, particularly the payments of boarders and lodgers, but these do not bulk large in the total, and as they are likely to vary closely with wages, for practical purposes the

¹ This view is supported by various statements made by Mr. J. A. Hobson, of England, such as the following: "Even if money wages had risen equally with the general level of prices, this excessive rise of food prices would have involved some loss to the wage-earners" (*Gold, Prices, and Wages*, p. 118). "The inevitable tendency of modern industrial forces, attested plainly by statistics of occupations, to assign an ever-diminishing proportion of national employment to the great staple manufactures engaged in supplying common 'routine' wants, and an ever-increasing proportion to subsidiary and luxury trades" (*The Problem of the Unemployed*, p. 23). See also article by the writer, "A Sociological View of the High Cost of Living," in the *Forum* for July, 1914.

fluctuations in the wages of any class of workers represent sufficiently well the fluctuations in the income of the families in that class.

The problem of outgo is not so simply stated. The items included are numerous and varied, and not the same for any two families, or for the same family in any two years. Yet the yardstick demands that there shall be a definite list of commodities which enter into the budget of the average family, and constitute the major portion of its outgo. The first step in the problem is to make out such a list of commodities.

This list will be divided into two main divisions, necessities, and comforts and luxuries, or "culture wants" as they are frequently called, though the term is somewhat grandiose in comparison with the items which it includes in the workingman's budget. The items included in the first category—food, clothing, shelter, heat and light—are fairly uniform for all families in a given working class, and are reasonably easy of enumeration. Those which come under culture wants are extremely varied and difficult to enumerate. Fortunately, it is not necessary to enumerate them for the purpose in hand. The things included in culture wants are really the things that make life worth living,² and the best possible index of the relative worth of different standards of living is the proportion of the total income which is available for culture wants, after the necessities have been supplied. It is not essential to inquire how this proportion is spent.

The task in hand, then, is to make out a budget of necessities which will come as near as possible to representing the actual expenditures of the ordinary workingman's family. This is the standard budget. The next step is to determine the cost of this standard budget at the two different times, under comparison; then to deduct this cost from the total income of the average family at each date. Finally, a comparison of the proportions of total income which remain to be expended for culture wants in the two cases, respectively, will indicate the relative height of the standards of the two periods. Since this is an undertaking in which method is everything, so that any fault in method will vitiate the entire analysis, the reader's indulgence is begged for frequent explanations of the exact process followed by the writer.

In the first place, to secure the list of necessities and the prices paid for them, it seemed best not to rely upon any theoretical es-

² Robert C. Chapin, *The Standard of Living among Workingmen's Families in New York City*, p. 198.

timates of what such families might or should do in the way of buying supplies, but to take the budgets of actual families as they themselves have reported them, and to use the items there included. Fortunately, within the past decade and a half, a number of reliable studies have been made. Those particularly used by the writer were Chapin, *The Standard of Living among Workingmen's Families in New York City* (1909); More, *Wage-Earners' Budgets* (1907); Kenngott, *The Record of a City* (1912); and Nearing's summary, *Financing the Wage-Earner's Family* (1913). These volumes contain a large number of carefully taken and thoroughly reliable budgets, picturing the exact living conditions of working families. The data were collected in or around the year 1908, and, in estimating prices, the effort was made to reduce everything as nearly as possible to the conditions prevailing in 1908.³

The budgets especially studied were those which came nearest to representing the average or "standard" family, a group composed of father, mother, and three children under fourteen, and living upon an income of about \$600 per year. The sum of \$600 a year was chosen, as it is the commonly accepted dividing line between unskilled and semi-skilled labor; and, while the ordinary unskilled laborer does not earn enough by his own efforts to provide his family with \$600 a year, this is a common income for families of this class; and within the class the yearly income would fluctuate in harmony with the wages of unskilled labor. The yearly earnings of an unskilled laborer will thus serve as a satisfactory index of the fluctuations of family income.

³ It may occur to the reader that the year 1908, being one of industrial depression, is not a fair one to choose for purposes of comparison with 1890. The living conditions of the working classes in that year might be expected to be below the average of a continuous period of several years. The fact is, however, that neither the wage figures nor the price figures, for 1908, used in this study, show any appreciable variation from the general trend of wages and prices for the past fifteen years. As far as every important computation in this study is concerned, the year 1908 might have been an average year. The reason for this is that the primary cause of the suffering among wage-earners in 1908 was neither high prices nor low wages, but unemployment. This study takes no account of unemployment, for the reason that comparative data on unemployment do not exist. In so far as unemployment has become a more marked industrial evil in the past few years, the result would be to make the condition of the workingman in recent years even worse than the figures in this study show. In point of fact, the writer has made a tentative comparison of conditions in 1908 and 1913, with the result, so far as the evidence goes, that conditions seem to have been no better, if not actually worse, in 1913 than in 1908.

A careful comparison of the budgets given in the works referred to shows that an income of \$600 would be apportioned by the average family about as follows:

Item		Per cent	Cost
Necessaries	{ Food	48	\$288
	{ Shelter	20	120
	{ Clothing	12	72
	{ Heat and Light	6	36
		<hr/>	<hr/>
		86	\$516
Culture wants		14	84
		<hr/>	<hr/>
		100	\$600

The next step is to make a general estimate of the specific items included in each of the four divisions of necessities. This of course can not be done with complete accuracy, since no two families spend their money in exactly the same way. But study of the budgets reveals a rather surprising uniformity in some particulars, and it is possible to make out a statement which will stand as a fair average.

This is particularly true in the case of food, where certain articles, appearing with much uniformity, make up the major part of the diet. The following, then, is the "standard" weekly budget of a "standard" family:

Commodity	Amount	Cost (1908)
Bread, wheat (5c loaves or stale 10c loaves)	20 loaves	\$1.00
Cereals, other as		
corn meal	2 pounds	.20
oatmeal	1 pound	.20
Beef, veal, mutton	6 pounds	.66
Pork, ham, bacon	6 "	.90
Poultry	1 pound	.15
Fish	2 pounds	.15
Butter	1 pound	.30
Cheese	1/2 "	.10
Milk	7 quarts	.49
Eggs	12	.25
Potatoes	2 "	.20
Vegetables, fresh30
Peas and beans, dried	1 pound	.10
Sugar	3 pounds	.20
Fruit20
Sundries (tea, coffee, pickles, etc.)35
Weekly total		<hr/> \$5.55 ⁴
Yearly "		\$288.00

⁴It may be worth noting that in making out this schedule the writer set down amounts and cost in order, taking them directly from the budgets, with

Since few unskilled wage-earners are home owners, the item of shelter for families of this class reduces practically to a question of rent—and for the most part tenement rent, or something analogous to it. The items concerned are more briefly set down than in the case of food, but they are less concrete and definite. Some of the elements of shelter are taken for granted, and others are not susceptible of accurate measurement and practical averaging. Thus it is taken for granted that apartments will be weather proof, and sanitary according to prevailing standards. On the other hand, lighting, ventilation, and the size of rooms differ greatly in different apartments, but can not well be tabulated. About all that can be done in setting down a standard rent budget is to estimate the average number of rooms occupied by a standard family, and the average price paid for them. Even this can not be done with close accuracy, as there is the widest possible variation, even in a given locality, in the type of accommodations secured for a given rental. The play of economic forces utterly fails to bring any close adjustment between commodity and price in the matter of tenement rents. Housing investigations frequently reveal situations like that reported in one of the Chicago studies, where, in a certain district, sixteen different rentals, ranging from \$4 to \$13 were paid for four-room apartments.⁵ Quite generally, however, families of the type in question will be found living in four-room apartments, and the price they pay will average around \$10 per month. The standard shelter budget, then, for the year will be:

Shelter (1908)	4 rooms	Cost, \$120
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The clothing budget is even more difficult to prepare. It is impossible to see how any family can clothe itself on the amount allotted for that purpose. Practically all the budgets which give complete outfits for a standard family call for an expenditure far in excess of the amount available to the standard family. The best that can be done is to set down a list of essential and representative articles, and regard them as typical of the clothing budget. Fortunately, this is sufficiently accurate for the purpose

no idea as to how the total would add up. The fact that when all the chief items in the budget had been set down, the total cost added up to within 35 cents (which was accordingly allowed for sundries) of the weekly amount allowed for such a family, seemed to afford an incidental indication of the accuracy of the estimates.

⁵ S. P. Breckinridge and Edith Abbott, "The West Side Revisited," *American Journal of Sociology*, July, 1911.

of comparing standards of living. For as long as the articles are representative, and exactly the same list of articles is used throughout the comparison, it is a matter of minor importance whether they are exactly and completely what a standard family would buy. When typical staple articles are used, it can reasonably be assumed that other articles would fluctuate at approximately the same rate as these, so that while a family might use more, or fewer, or different articles of clothing, a given list would vary in price as between two periods of time harmoniously with the representative list set down. And this is all that needs to be known for the purpose of the comparison in hand.

The following schedule gives a list of a single year's outfit for a man and a woman. It is ordinarily estimated that the clothing of three children under fourteen will cost almost exactly the same as that of the father and mother. In this case, allowing 80 per cent of the clothing bill of the parents for the needs of the children, and adding it to the expenditures for the parents, makes a total amount exactly equal to the amount allotted for the clothing of the standard family. If this procedure is followed in each case, the comparison will be accurate. The standard clothing budget follows:

Article		Cost (1908)
Man	1 suit	\$10.00
	1 hat	1.50
	3 shirts	1.50
	1 pair overalls75
	1 pair trousers	2.00
	1 pair shoes	2.50
	1½ suits underwear	1.50
	Socks	1.00
Woman	1 suit	7.00
	1 hat	1.50
	1 pair shoes	1.50
	2 calico dresses	1.00
	1 flannel or woolen dress	5.00
	2 waists	1.00
	2 suits underwear	1.50
	Stockings75
Total		\$40.00
Add 80 per cent for children		32.00
Total yearly clothing budget for family....		\$72.00

There remains the matter of fuel and light. Here are three chief items—coal, gas, and kerosene. Some allowance should

also be made for wood and matches, though many families pick up their supply of the former. Coal is the most important item, and is used for cooking and heating. Gas comes next, used for cooking and lighting. Kerosene is also quite largely used for these purposes. The expenditures of the standard family for these items would be approximately as follows:

Article	Amount	Cost (1908)
Coal	3 tons	\$21.00
Gas	10,000 cubic feet	9.00
Kerosene	26 gallons	3.38
Wood and matches		2.62
Total		\$36.00

The foregoing paragraphs furnish a standard budget of the necessities of life, as used by a workingman's family, dated 1908. In that year a family with an income of \$600 could have bought the commodities listed, at the prices current in the stores they would naturally patronize, and have 14 per cent of their income, or \$84, left for culture wants.

The next step is to see what exactly these same commodities would have cost under like conditions in 1890. The year 1890 is chosen for the following reasons. The accuracy of the comparison in hand demands that, as far as possible, the figures used be taken from continuous series, based on data gathered by the same agency and under conditions as nearly identical as possible. All incidental variations due to locality, quality of goods, type of selling agency, etc., will thus be eliminated, leaving only the fluctuations due to actual changes in price. The United States Bureau of Labor Statistics furnishes a number of index figures, covering many of the important items concerned, and these run back to 1890, but no farther. The year 1890 is also a good representative year for conditions at the end of the last century. The disturbance of prices due to the Civil War was over, and the recent great rise in prices had not begun. It was a prosperous, ordinary, normal year.

The method employed in comparing prices as between 1908 and 1890 is as follows: Wherever an official index number for a given commodity exists, that will be used. The cost in 1908 is divided by the index for 1908, giving the cost at the basic figure 100. This is then multiplied by the index for 1890, which gives the cost in 1890. Where an index for the exact commodity is not available, an

index for a closely related or representative commodity is used. Thus, there being no index for bread, the index for flour is used, it being assumed that the price of bread will vary closely with the price of flour. Where no index is available, and where no quotations of actual prices can be found for 1890, the cost of the item in question is assumed to amount to the same proportion of the total cost of the given budget in 1890 as it was in 1908. Thus, the cost of fresh vegetables in 1908 having been set down as 1/18 of the total food budget, 1/18 of the food budget of 1890 is allowed for the same commodity. The items with reference to which this procedure is followed are few and are of minor importance, and the lack of accuracy involved could not materially affect the general result. The indexes used are taken from United States Bureau of Labor Bulletin, No. 110, pages 18 and 19.

Commodity	U. S. index used	Cost 1908	Index 1908	Index 1890	Cost 1890
Bread, wheat	Flour, wheat	\$ 1.00	127.1	110.2	\$0.87
Cereals, other	Corn meal	.20	142.6	101.3	.14
Beef, veal, mutton	Round steak	.66	135.5	97.6	.47
Pork, ham, bacon	Pork chops	.90	144.6	96.5	.60
Poultry	Hens	.15	134.9	102.8	.11
Fish		.15			.12e
Butter	Butter, creamery	.30	127.9	99.2	.23
Cheese		.10			.08e
Milk	Milk, fresh	.49	123.2	100.4	.40
Eggs	Eggs, strictly fresh	.25	142.8	100.3	.18
Potatoes	Potatoes, Irish	.20	129.8	109.0	.17
Vegetables, fresh		.30			.24e
Peas and beans, dried		.10			.08e
Sugar	Sugar, granulated	.20	101.3	120.8	.24
Fruit		.20			.16e
Sundries		.35			.27e
Total weekly budget		\$ 5.55			\$4.26
Total yearly "		\$288.00			\$226.72

e. Estimated.

Next in order is the item of rent—the most difficult of all for statistical comparisons. The factors which enter into that human necessary called an "apartment" are so numerous, and many of them so intangible, that it is practically impossible to set up a fixed standard in this particular. Furthermore, as has been observed over and over again by students of housing conditions, there is no approach to uniformity in the rentals of the same sort of apartments in the same locality at the same time. Anything in the nature of an index figure is hardly to be thought of. Cer-

tainly it does not exist. More than this, authorities seem to agree that there are not in existence data which will furnish anything approaching an exact mathematical comparison of rentals in the United States at about the years 1890 and 1908. Yet, with reference to so important a point as this, it is requisite that some trustworthy indication of the situation in general be secured, or this whole study will be inconclusive.

There are two chief sources of information on this subject. One consists in the scattered references to rentals which appear in discussions of housing conditions written about 1890. The other is the general opinion of students who have gone into the question thoroughly, and whose observation and experience gives authority to what they say.

As to the former of these lines of evidence, the showing is meager. In *Scribner's Magazine* for 1892 there appeared a series of articles dealing with "The Poor in Great Cities." Here and there throughout these pages are citations of rentals, dealing mainly with New York City, but with one reference to Chicago. In the *Publications of the American Economic Association* for 1893 is to be found a prize essay by Marcus T. Reynolds, dealing with the question in hand, in which a large number of rentals are quoted, these too being practically limited to New York, Brooklyn, and Chicago.⁶ While a comparison of these figures with those afforded by recent studies in the same cities seems to indicate a considerably lower general level of rates at the earlier date, yet the showing is so inconclusive from the mathematical point of view as not to justify taking space in the present study for the presentation of parallel sets of figures. In a report of the Massachusetts Bureau of Statistics of Labor, published in 1882, entitled *Fall River, Lowell, and Lawrence*, a number of typical rentals for these three cities are quoted. If these are compared with the figures recorded in Kenn-gott's *Record of a City*, it appears that on the whole as good accommodations could be secured in Lowell for about \$6 in 1882 as for \$8 or \$9 in 1908. Here, again, a positive conclusion is not warranted.

The most reliable basis of judgment is the testimony of experts. Mr. Lawrence Veiller, probably the highest authority in the country on housing in general, in a personal letter to the writer, says.

⁶ Marcus T. Reynolds, "The Housing of the Poor in American Cities," *Publications of the American Economic Association*, vol. VIII (March and May, 1893).

"The impression which I have gained through my more or less close observation during the past twenty years is, that although there has been a very considerable increase in the cost of living throughout the United States, the largest factor in that cost of living—rent—has not materially increased." Against this opinion are to be set the statements of a number of authorities. Thus Mr. Streightoff says: "In 1900, a two-room tenement in New York City could be hired for from \$8 to \$10 a month, three rooms at \$8 to \$15, four rooms at \$13 to \$17, and five rooms for about \$23. Since that time rentals have risen."⁷ Mrs. More says that rents "have increased in the last two years, during which these statistics were taken (1903-1905), from 10 to 20 per cent. The most prominent real-estate agent in the neighborhood puts the rate of increase at about 15 per cent as a conservative estimate."⁸ Professor Chapin says: "The burden of high rentals was increased (from 1905) up to the middle of the year 1907 by the general tendency of rents to rise. . . . The amount of increase varied from 50 cents to \$5 a month, but in the majority of cases was \$1.00, \$1.50, or \$2.00."⁹ These three quotations, taken together, bear witness to a steady rise of rentals in New York City from 1900 to 1907. Mr. Everett P. Wheeler is responsible for the statement that "In 1860, a workingman could get as comfortable rooms in New York City for \$8 a month as he now (1913) can for \$16. The reason for this is mainly that the cost of building has greatly increased."¹⁰ It is not likely that all, or nearly all, of this rise was accomplished before 1890. The Massachusetts Commission on the Cost of Living (1910) found that "Rents throughout Massachusetts have increased very materially during the past fifteen years. This upward movement has not, however, kept pace with the increase of the general cost of living."¹¹ Referring to conditions in Lowell, Mr. Kennigott says: "During the last few years the great industrial corporations . . . have discarded the old paternal system of caring for their employees. The result is that the rents in houses formerly belonging to the corporations have been greatly in-

⁷ Streightoff, *The Standard of Living among the Industrial People of America*, p. 71.

⁸ Louise B. More, *Wage-Earners' Budgets*, p. 32.

⁹ Robert C. Chapin, *The Standard of Living among Workingmen's Families in New York City*, pp. 83-4.

¹⁰ Wheeler, "The Increased Cost of Production," *Annals of the American Academy*, vol. 48, p. 244.

¹¹ *Report of the Massachusetts Commission on the Cost of Living*, p. 134.

creased.”¹² Thus the bulk of authoritative opinion seems to lean strongly in favor of the view that there has been a decided increase in tenement rents in the past fifteen or twenty years.

Before attempting to form a final conclusion, one or two general facts should be considered. The first of these is the universal and well-known tendency of rents to rise in a growing society, independently of the rise of prices in general. There would certainly have to be some powerful forces at work in such a country as the United States to prevent the rents of dwellings from rising at a rate at least approximating that of the rise in the general price level. It is hard to conceive what these forces could have been in the past two decades. It appears that the operation of this tendency of rents to rise is often obscured by the fact that, *in a given tenement house*, rents often rise slowly, if at all, especially in the case of steady tenants. The foremost factor in fixing rents seems to be the cost of erection and upkeep. Rents once fixed may then be maintained at almost the same figure indefinitely. But if new tenements in 1890 were compared with new tenements of the same sort in 1908 (which is the only logical form of comparison), it would certainly seem that the great increase in the cost of materials and the cost of labor, as Mr. Wheeler observed, must have necessitated a decided increase in the rentals charged. It should also be noted that the rapid urbanization of the United States during the past two decades must inevitably have had the tendency to increase the cost of housing for the wage-earning classes in general.

Putting all these things together, the fact of a general rise in tenement rents between 1890 and 1908 seems to be well established. And it seems well within the margin of conservatism to say that accommodations which cost \$10 in 1908 could have been secured for not more than \$8 in 1890.

No official index figures exist for the retail prices of articles of clothing. However, United States Bureau of Labor Bulletin No. 99, Table III, gives indexes of wholesale prices of a number of articles of clothing, and these have been used in estimating the budget for 1890. A comparison of the official indexes of retail and wholesale prices of the same commodities, where such are available, shows that, while the wholesale prices fluctuate more violently from year to year, the rise in retail prices is greater, if anything, over a period of years than the rise in the wholesale prices. It is

¹² Kenngott, *Record of a City*, p. 28.

safe to assume that use of indexes of wholesale prices will tend to overstate, rather than understate, the prices in 1890.

Commodity	U. S. index used	Cost 1908	Index 1908	Index 1890	Cost 1890
Man Suit	Serge	\$10.00	132.	120.9 (1892)	\$8.79
Hat		1.50			1.50 ^e
Shirts	Shirtings (average)	1.50	120.0	112.9	1.41
Overalls		.75			.75 ^e
Trousers	Trouserings	2.00	127.6	106.6	1.67
Shoes	Men's vici calf	2.50	114.8	101.0	2.20
Underwear	Underwear (60 p.c. wool)	1.50	106.0	106.9	1.51
Socks	Socks (men's cotton)	1.00	88.9	133.3	1.49
Woman					
Suit	Serge	7.00	132.0	120.9 (1892)	6.41
Hat		1.50			1.50 ^e
Shoes	Women's solid grain	1.50	118.5	104.0	1.31
Dresses, calico	Calico	1.00	104.3	117.5	1.13
Dress, wool	Cashmere, all wool	5.00	127.1	119.8	4.71
Waists		1.00			1.00 ^e
Underwear	Underwear (60 p.c. wool)	1.50	106.0	106.9	1.51
Stockings	Hose, women's cotton	.75	84.2	131.6	1.17
Total yearly budget		\$40.00			\$38.06
Add 80 per cent for children		32.00			30.45
Total yearly budget for family		\$72.00			\$68.51

e. Estimated

In determining the fuel and light budget it is necessary to use again the indexes of wholesale prices furnished in Bulletin No. 99. Indexes are furnished for coal and kerosene. An index is also given for matches, declining from 111.5 in 1890 to 85.4 in 1908. No index is given for kindling wood, but it is reasonable to suppose that the price of this item would have risen enough to offset the fall in the price of matches. Lacking accurate data, it seems best to leave the figure for wood and matches the same in 1890 as in 1908. The indexes for gas, given in the retail price series, do not go back as far as 1890. They indicate, however, that the price of gas has been falling. The figure of \$1 per thousand is selected rather arbitrarily as the price in 1890. It is probable that working families in the earlier year burned relatively less gas and more kerosene than in 1908, so that the lower price of kerosene would more than offset the higher price of gas. The heat and light budget follows:

Commodity	U. S. Index used	Cost 1908	Index 1908	Index 1890	Cost 1890
Coal	Anthracite coal, stove	\$21.00	127.1	97.8	\$16.14
Gas		9.00			10.00e
Kerosene	Petroleum, refined for export	3.38	133.9	112.9	2.86
Wood and matches		2.62			2.62e
Total fuel and light budget		\$36.00			\$31.62

e. Estimated

The standard family's complete budget for necessities in 1890 is:

Food	\$226.72
Shelter	96.00
Clothing	68.51
Fuel and light	31.62
	<hr/>
	\$422.85

There now remains the most critical part of the whole undertaking—the estimate of the family income in 1890 of the same grade of family as would receive \$600 in 1908. It was stated above that, since wages constitute the major portion of the income and since other elements of income would be likely to vary closely with wages, the wages of an unskilled worker would be taken as the index of family income. If the Bureau of Labor furnished an index of the wages of unskilled labor, and if such an index were reliable, the task would be simple enough. But no such index is furnished, probably for the reason, mentioned above, that it is practically impossible to make an average of wages which will have any real value. The Bureau of Labor Statistics does furnish, however, in its *Wages and Hours of Labor Series*, indexes of the hours per week, and wages per hour in a number of industries. Combining these two, it is possible to get an index of full-time weekly earnings. These indexes work out as follows in the following industries:

Industry (manufacturing)	Index 1908	Index 1890	Bulletin No.	Page
Cotton goods	142.9	102.1	128	8
Woolen and worsted goods	125.1	100.6	128	112
Silk goods	106.6	100.8	128	174
Lumber	114.7	102.3	129	8
Furniture	122.2	101.8	129	125
Boot and shoe	120.4	98.8	134	8
Hosiery and knit goods	129.4	106.8	134	73

An absolutely accurate average of these indexes should of course be weighted on the basis of the number of workers in each occupation. This it was found impossible to work out, because the occupation statistics of the census are not classified on exactly the same basis at different decades nor do they correspond with the above grouping. A simple average of the above indexes will, however, serve the purpose roughly, and will indicate the relative height of the wages of these classes of workers in 1908 and 1890. The average of the above indexes for 1908 is 123, and for 1890 101.9. On this basis an income of \$600 in 1908 would be represented by an income of approximately \$497 in 1890.

Other methods of forming an estimate of wages are as follows. Miss Edith Abbott, in her careful résumé of wage statistics, *The Wages of Unskilled Labor in the United States, 1850-1900*, Table X, cites \$1.47 per day as the average wage of general unskilled labor in 1890. No comparable single figure is known to the writer for the year 1908. But a study of wage statistics, and a familiarity with the wages actually earned by unskilled laborers in the last few years, show a wage of \$9 per week, or \$1.50 per day to be one of the commonest wages earned by workers of this class.¹³ Taking this as an average for 1908 and comparing it with Miss Abbott's figure, an income of \$600 in that year would be represented by an income of \$588 in 1890. The *Statistical Abstract of the United States* gives an index of full-time weekly earnings, of general laborers, not merely unskilled, which stands at 122.4 in 1907 and 101.0 in 1890.¹⁴ These figures have not been regarded as very reliable, and the series has been discontinued since 1907. Using these indexes for what they are worth, \$600 in 1907 becomes \$495 in 1890.

Probably the most valuable and significant set of figures for the present purpose is that furnished by the *Statistical Abstract* (1914, p. 666) giving the average number of wage-earners in the manufacturing industries of the United States, and the total wages paid in dollars from 1850 down to 1910. Obviously, dividing the total wages paid by the average number of wage-earners will give the average full-time yearly earnings of a laborer for the year in question. The figures given are for the calendar year preceding the

¹³ The New York State Factory Investigating Commission found 50,000 men in four trades alone in New York earning under \$8 per week in 1913-14. See *The Survey*, December 12, 1914, p. 279.

¹⁴ *Statistical Abstract of the United States*, 1910, p. 251.

census year, but inasmuch as this is true throughout the series, there can not be any great discrepancy in using the figures for 1890 as indicative of that year, and estimating those for 1908 on the same basis. In 1890 there were 4,251,535 wage-earners receiving \$1,891,209,696 or \$444.83 each on the average. For 1908, wages and number of wage-earners were estimated by taking three fifths of the increase of each item between the years 1905 and 1910, and adding it to the figures cited for 1905. This gives an estimated number of wage-earners of 6,156,382, receiving an estimated total of \$3,100,400,711 in wages, or \$503.61 each in 1908. Using the proportion \$503.61 to \$444.83 as a basis of calculation, \$600 in 1908 becomes approximately \$530 in 1890. This method seems to the writer to be by all odds the most accurate one known to him of estimating relative general wages in the years in question.¹⁵

The various methods suggested above indicate a family income for the standard family in 1890 varying from a few dollars less than \$500 to nearly \$600. The most valuable method indicates \$530. In order to be absolutely on the safe side, with regard to overdrawing conditions in 1890, \$500 may be taken as the income for that year.

In order to arrive at the final comparison of the standards of 1890 and 1908, it is merely necessary to subtract from the total income of \$500 the sum of \$422.85, which covers the expenditure for necessities of the standard family in 1890. There remains a balance of \$77.15, or 15.4 per cent of the total income in 1890, as against 14 per cent in 1908, to be spent for culture wants.

It is evident, then, that on the basis of the test adopted at the outset, *viz.*, the relative proportion of total income left for culture wants, the working families of 1890 enjoyed a higher standard of living than those of 1908. It might perhaps seem, at first thought, in the light of what was said about the relatively smaller increase in the price of luxuries than of necessities, that the family in 1908 with its 14 per cent could purchase more in satisfaction of culture wants than the family in 1890 with its 15.4 per

¹⁵ It should be noted that most of the figures cited, being based on general wages instead of unskilled wages alone, have a tendency to overstate the rise in income of such families as we have in mind, because of the fact that the progress of unionization in the past twenty-five years has given a stimulus to skilled and semi-skilled wages, by which unskilled labor has benefited little, if at all. But it is impossible, in the case of most wage statistics, to separate unskilled wages from the rest, and they must stand as they are.

cent. If the culture wants of the unskilled laborer's family included real luxuries, there might be an element of truth in this supposition. But, as has been intimated above, they do not. The items of expense which are included under culture wants in the \$600 family include outgo for doctors, medicine, dentistry, religion, education, saving, recreation, insurance, etc., items which are regarded as utter necessities by more well-to-do families, and with reference to which there is no reason to suppose that the cost has not increased at least as fast as the average of prices.

The writer is well aware that the foregoing data do not prove that the common laborer's family was better off in 1890 than in 1908. Nothing statistical is *proved* if there is a single estimate, a single approximation, a single gap in the demonstration, a single chance for error. But he does believe that they furnish very strong evidence in support of the proposition. Every effort has been made, in cases of uncertainty, to throw the balance against conditions in 1890 rather than in favor of them. Every estimate has been intended to overstate prices and understate wages in 1890, rather than the reverse. The conclusions have been checked up by the writer, when possible, by other methods, and particularly by making a similar comparison of conditions in 1882, using in this case, not index figures, which do not exist, but actual price and wage quotations, and contemporary descriptions of living conditions in that year. The sources utilized especially were two publications of the Massachusetts Bureau of Statistics of Labor, *viz.*, Carroll D. Wright, *Comparative Wages, Prices, and Cost of Living*; and Fall River, Lowell, and Lawrence. Comparison was also made with the Seventh Annual Report of the Bureau, dated 1876, which gives some very remarkable and complete data as to living conditions in 1875. The results of this study also indicate that conditions in the eighties were considerably better than in 1908.

It is probable that more exhaustive study of prices actually current in 1890 might necessitate some minor modifications in various items of the budget. It does not seem possible that it would materially affect the general conclusions. One thing seems safe to say—that the foregoing data *disprove* the right of anybody to assert with serene confidence that the standard of living of the American common laborer has improved in the past thirty years. The burden of proof is laid on the optimists, to bring forward some positive verification of their assumptions.

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